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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,790

06/17/2005

Thomas Reid Kelly

D-3173

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7590

11/30/2007

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EXAMINER

KELLY, YOLANDA LYNNETTE

ART UNIT

PAPER NUMBER

4174

MAIL DATE

DELIVERY MODE

11/30/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/511,790	Applicant(s) KELLY ET AL.	
	Examiner Y. Lynnette Kelly	Art Unit 4174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/17/2005 & 8/15/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 46 and 47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 46 recites the limitation: "a product of claim 41" in line 3. There is insufficient antecedent basis for this limitation in the claim. Claim 46 is an improper dependent claim. Claim 41 is drawn to a process and claim 46 is improperly drawn to a product.

Claim 47 recites the phrase "a product of claim 41" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim. Claim 47 is an improper dependent claim. Claim 41 is drawn to a process and claim 46 is improperly drawn to a product.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 26-28, 33-39, 41 and 42 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Wood US 3,892,870.

In regard to claims 26-28 and 33-37, Wood teaches an artificial fruit and the process of making the same. The food product is made by the process of mixing a solution of alginate or low-methoxy pectate sol with a solution of calcium salt and acid. Column 2, line 22-Column 3, line 25. The solution of calcium salt may be mixed with the alginate or low-methoxy pectate sol at the same time or may be released in a controlled manner in order to avoid rapid gelling. *Id.* The salt used may be a calcium citrate or calcium tartrate that are insoluble at neutral pH but soluble at acidic pH and have a solubility between 0.02% and 0.3%. *Id.*; Application Page 11, line 23-Page 12, line 15. The mixing is carried out in an in-line mixer, where the differing solutions may be feed into the mixer in a controlled manner and the resulting solution may be immediately transferred from the in-line mixer to a continuous conveyor containing molds where it sets. Column 3, lines 15-25.

In regard to claims 38, 39 and 42, in order to create a fruit like product, fruit flavor, fruit pulp, fruit puree or Vitamin A (Beta-Carotene) may be included in the gel matrix. Column 2, lines 13-18.

In regard to claim 41, Wood teaches that the gel may be formed into a block, extruded into molds and/or cut into any desired shape after extrusion from the in-line mixer. Column 3, lines 15-25.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 48 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood.

As stated above, Wood uses an in-line mixer to mix a dispersion of alginate or low methoxy pectate sol, water and calcium salts. The calcium salts may be feed into the mixer at a controlled rate to avoid rapid gelling. Column 2, lines 60-65. The gelation is carefully controlled so that substantially none of the alginate or pectate sol comes in contact with the calcium ions until gelation is desired; however, Wood does not specifically state that the feeds are separate or spaced apart. Column 3, lines 3-7; Example 3.

With specific regard to claim 49, Wood also states that the gel may be formed into rectangular molds and later cut into a desired shape. Column 3, lines 15-25.

Therefore given Wood's careful control of gelling ions within the in-line mixer, it would have been obvious at the time this invention was made for a person of ordinary skill in the art to have created an alginate or low methoxy pectate gel in an in-line mixing system with separate feeds for the alginate or low methoxy pectate spaced apart from the calcium gelling ion feeds. The resultant product may then be fed into molds and cut upon cooling.

7. Claims 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood, as applied to claim 26 above, in view of Nussinovitch et al. US 6,299,915.

As stated above, Wood discloses an artificial fruit made by the process of combining a solution of alginate or low methoxy pectate with a calcium salt and an acid. Wood adds a variety of additional ingredients to the gel formulation (Example 3); however, Wood does not teach the addition of an anhydrous liquid dispersant in the aqueous solution.

Nussinovitch discloses a protective hydrocolloid coating. Nussinovitch creates a gel out of any gelling agent, such as alginate or low methoxy pectin, with the addition of a gelatin-inducing agent, such as a calcium salt. Column 3, lines 17-32. The gelatin incorporates the natural oils of the fruit to be coated and may further comprise a known emulsifying agent, such as lecithin and polyglycols. Column 3, line 58-Column 4, line 51. This incorporation is Applicants preferred embodiment for a dispersant that will hold

the materials in suspension for up to fifteen minutes. Application, Page 5, lines 1-23.

The solution is edible and may be used on fruits and vegetables. *Id.*

Since Wood teaches a process of making a food gel from a solution of alginate or low methoxy pectate with a calcium salt and an acid and Nussinovitch discloses a gel that may be made from the same composition, it would have been obvious at the time this invention was made for a person of ordinary skill in the art to have created a alginate or low methoxy pectate with a calcium salt and an acid with the addition of an emulsifying edible oil containing lecithin.

8. Claims 40 and 43-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood, as applied to claim 26 and 39 above, in view of Dugger et al. WO 98/47392 and Mann US 5,718,894.

Wood discloses a gel product that is continuously feed into an in-line mixer resulting in a calcium alginate gel matrix that may or may not be pasteurized and is cut immediately after cooling. Column 3, lines 15-34; Column 4, lines 42-67. Wood teaches an artificial fruit made by the process of combining a solution of alginate or low methoxy pectate with a calcium salt and an acid; however, Wood does not teach the addition of an anaerobic biologically active substance or the use of the claimed invention to feed livestock.

Dugger discloses an animal feed that contains animal nutritional materials, animal immune system stimulants, animal appetite stimulants, animal color enhancers, and animal therapeutic agents dispersed in a gel carrier matrix. Page 3, lines 18-28.

The animal nutritional material may contain fat, protein or vitamins. Page 5, lines 1-2. Suitable gelling matrixing agents include algin, pectin, gelatin and bacterial gels. Page 8, lines 11-22. The animal feed may be prepared to have the shape, scent and taste of fruit in order to be used as a bird feed. Page 4, lines 22-24.

Mann discloses a formulation of microorganisms suitable for administration to an animal for therapeutic purposes. Column 1, lines 50-57. The formation is administered with the feed. Column 3, lines 27-30. The bacteria used are all anaerobic bacteria, such as *Lactobacillus*, *Enterococcus Faecalis*, and *Bacillus licheniformis*. Column 4, lines 5-26.

Given Wood's gel product that is continuously feed into an in-line mixer resulting in a calcium alginate gel matrix that may or may not be pasteurized and is cut immediately after cooling and Dugger's method of incorporating nutritional materials within a gel carrier matrix, such as a bacteria gel, it would have been obvious at the time this invention was made for a person of ordinary skill in the art to have used Mann's anaerobic bacterial formulation as a animal therapeutic agent within a fast hardening gel matrix, such as Wood's. As taught by Dugger, the resulting nutritionally supplemented animal feed may be used to feed birds.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Y. Lynnette Kelly whose telephone number is 571-270-

3472. The examiner can normally be reached on Monday - Friday EST (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Tarazano can be reached on 571-272-1550. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gwendolyn Blackwell/
Primary Examiner, AU 1794

Y. Lynnette Kelly
Examiner
Art Unit 4174

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